Supplement to January, 1935, issue, Vol. V, No. 3.

TEXTILE RESEARCH
Vol. IV, Nos. 1-12, 1933-34

Author Index
Subject Index
of
Abstracts, Research Reports,
Articles and Book Reviews

INDIANA UNIVERSITY
LIBRARY
JAN 8 1935

Official Publication
of
United States Institute for Textile Research, Inc.
Secretary's Office
65 Franklin St., Boston, Mass.

281073

TS1300
.T3

Textile Research

Vol. IV, 1933–34

Abstracts

Author Index

PAGE

A

Abramovitch, J. Sizing of Yarns and Fabrics: Moistening 116
Some Auxiliary Products Used in the Textile Industry 357
Ahmad, Nazir. Cotton: Effect of Atmospheric Humidity on Moisture Content of 354
Ahmad, Nazir and Sen, D. L. Wax Content of Indian Cottons 583
Anderson, B. W. and Payne, C. J. Liquids of High Refractive Index 407
Armand, L. Wool: Loading of 486
Astbury, W. T. Wool: Molecular Structure of .. 47
Astbury, W. T. and Woods, H. J. Hair, Wool, and Related Fibres: X-ray Studies of 442
Atkinson, G. L. Aluminum with Regard to Textile Dyeing and Finishing Machinery .. 483
Preparing and Finishing Repp and Poplin Fabrics: Reducing Costs and Faults in .. 149
Worsted Warp and Woolen Weft Poplins and Reps: Finishing of 482
Atsuki, K. and Ishiwara, M. Cellulose Gel: Structure of. V, VI 310
Cotton Fibre: Minute Structure of 116
Atsuki, K. and Kagawa, I. Cellulose: Copper Number of 197
Cellulose Acetate: Determination of Acetic Acid in 204
Atsuki, K. and Sobue, H. Cellulose Gel: Structure of. IV 484
Ayyar, V. R. and Ayyangar, G. S. Cotton Hairs 198 i

B

Ball, R. H. and Hibbert, H. Cellulose o-Chlorobenzyl Ethers: Formation 144
Barbera, G. Pigments in Natural Silk 441
Baroni, G. Oxidized Fatty Acids: Determination of—in Threads and Crepes 536
Barritt, John. Sulphur in Wool: Distribution and Origin of 443
Barsha, J. and Hibbert, H. Cotton and Wood Cellulose: Assumed Non-Identity of 441
Barsy, P. Cold Dyeing of Cellulose Acetate with Reserve Printings 484
Bartham, Werner. Viscose Rayon: Calculable Relationships in Spinning of 200
Baumann, Morand. Production of Hilioindoscarlet S on the Fibre 537
Baumann, Th. Linen: Process Giving Cotton the Appearance of 481
Bayes, A. W. Testing in a Spinning Mill: Systematic 360
Bean, Percy. Some Faults in Finished Fabrics . 150
Beck, Conrad. Microscopy: Recent Advances in 407
Becker, Genevieve. Spectral Reflectance of the Philippine Island Gov't Standards for Abacá Fibre 309
Belenky, Ludwig J. Colloidchemical Properties of Sulfur Dyes 586

PAGE

Bergmann, Karl H. Oxycellulose 311
Bernoulli, Peter F. Dyeing of Acetate Rayon with Basic Dyestuffs 404
Bertham, H. Acetate Rayon: On Saponification of 152
Beutel, E., Grunsteidl, E. and Ullmann, E. Genuine Silk and Tussah and Yamamai Silks: Differentiating Between—by Means of Dry Micro-Distillation 199
Beutel, E. and Kutzelnigg, A. Sorption of Iodine Vapor by Fibres. I. Plant Fibres 480
Billing, W. M. Analysis of α-Cellulose 267
Binns, Henry. Cloth Qualities: Tactile Comparison of the—of Continental and Noble Combed Materials 535
Biot, A. Refractive Index of Solids: Investigation on Determination of the 155
Bito, S. Wild Silks. II, III 147
Blackman, B. D. Printing: Converter's Guide to 356
Blumberg, J. S. P. Azo Chromophores 265
Bochter, K. Sewage of the Textile Industry 156
Bohringer, Hans. Rayon: Influence of Rate of Stretching on Strength of 149
Bondy, H. F. and Lauer, G. G. Antioxidants of Rubber Latex 403
Bonnet, L. Bleaching, Coloring and Finishing of Fine Cotton Fibres 586
Dustiness of Certain Sized Fabrics 312
Braconnot, J. Bleaching and Dyeing of Viscose Schappe 404
Bradshaw, F. Azo Dyestuffs: Application of the Insoluble 266
Bragg, Sir Wm. Crystals of the Living Body .. 112
Brandenburger, I. Resinified Linen: Preparation 47
Brandt, Carl D. Cotton Cards Do Not Remove Short Fibre 584
Brecht, W. and Helmer, E. Wool: Determination of—in Wool-Containing Papers by Chemical Means 408
Briggs, H. B. Aging Problems 202
Brohel, Jesse S. Dyeing Rayon Crepes Before Finishing 116
Brown, J. S. Direct Dyeings: Mechanism of .. 484
Wool: Research Notes on 408
Brugere, S. Cellulose Acetate: Treatment of .. 203
Bryant, D. M. Kemp in Blackface Sheep 145
Burns, R. H. Fleece Analysis in Sheep 145
Burton, D. and Robertshaw, G. F. Sulfonated Oils and Glass Electrode 445
Busse, W. F. Elastic Colloids: Structure 198

C

Caldwell, S. A. C. Flax Fibre Structure and Quality 43
Calvert, Mary A. and Clibbens, Douglas A. Mercerization Process: Deconvolution of Cotton Hairs as a Test of 115

PAGE

Chadwick, H. Rayon Woven Cloth 443
Chesneau, R. Flame-Proofing of Textiles 47
Chetverikov, N. Cellulose: Preparation from Cotton Hulls 198
Choisy, G. Delustering of Rayon 354
Chowdbury, J. K. and Basu, N. N. Jute and Cotton Celluloses: Comparative Studies 43
Clark, J. Andrew. Water as Applied in Finishing Cotton Piece Goods 317
Clark, G. L. and Southard, Julia. Sorption on Cotton Fibres of Dyes with Varying Molecular Association in Solution 485
Clement, L. Riviere, C. and Beck, A. Cellulose Derivatives: Coloring of—by Aqueous Iodine Solutions 317
Clibbens, D. A. Stocking Fabrics: Periodic Variations in Hank Processed Yarn and Patterns Produced by Them in 151
Clibbens, D. A. and Geake, A. Mercerized Hosiery Yarns: Examination of 154
Cliff, H. S. Load-Extension Recorder 155
Clifton, Geo. H. Dyeing Silk and Rayon Hosiery: Avoiding Defects in 153
Colombo, Guido. Silk: A New Wild 147
Silk: Change in Physical and Chemical Character of—Caused by Weakening of Larva 264
Silk Fibres in Reeling: Cohesion of 354
Wild Silks on European Market 481
Cook, O. F. Acala Cotton: Type Selection 440
Coordt, W. Rayon Fabric Cross-Sections: Preparation 319
Cotton, F. Harriss. Latex and Jute 312
Crummett, Alan. Raw Silk: Technical and Commercial Properties of 46
Czapla, K. Ashed Fibres: Microscopy 197

D

Dantzer, J. and Roerich, O. Flax Yarn: Relation Between Absolute and Wet Strength .. 402
Hard Cordage Fibres 204
Davidson, G. F. Cotton Cellulose: Dissolution of Chemically Modified in Alkaline Solutions 533
Hydrogen Ion Concentration: Determination of—of Hypochlorite Solutions with Glass Electrode 154
Davidson, P. L. Development of Air Conditioning in Industrial, Residential and Public Buildings 360
Davis, W. Abrasion Testing of Knitted Textiles 588
Davis, W. and Edwards, C. H. Spirality in Knitted Fabrics 584
Déribéré, Maurice. pH Determination in the Dyeing Industry 536
pH in Dyeing 406
Desalbres, L. Surface Tension and Wetting Phenomena in the Textile Industry 316
Doak, Clifton C. Cotton Hybridizing: New Technique in 583
Dry, F. W. Hair Fibres of the Romney Sheep .. 441
Duerden, J. E. Negro Hair: Spirals and Twists 46
Wooled Sheep: Evolution in 481
Duerden, J. E., Murray, C. A. and Botha, P. S. Wool in the Merino: Growth of 264
Dumville, J. Drafting and Doubling: Considerations in Worsted 264
Duran, Leo. Raw Silk Grading in Japan 534

E

Edelstein, Sidney M. Textile Fibres: What the Microscope Shows of 360
Edgar, Rachel. Fabrics: Comparative Analysis of Three Hundred 402
Edwards, C. H. Unshrinkability of Wool in Industrial Practice: Obtaining 358
Eichler, H. Azo Dyes: Proposal for Nomenclature of 483

PAGE

Esselen, G. J. Rayon: Before Papyrus . . . Beyond 534
Estey, A. C. Processing Piece Goods 47

F

Fehre, Walter. Bleaching with Strongly Alkaline Hydrogen Peroxide 404
Flint, R. Artificial Silk: New Methods for Investigation of 535
Folgner, R. and Schneider, G. Bleaching of Wool 483
Fowle, E. D. Twist Direction 584
Framlington, R. O. Hosiery Dyeing: After-Treatment Methods in 154
Freitag. Natural Silk: Is It Possible to Produce—Artificially? 116
Fuller, T. S. Safety Razor Blades: On Sharpness Testing of 407

G

Garvie, W. M., Griffiths, L. H. and Neale, S. M. Absorption of Dyestuffs by Cellulose 444
Gerö, Alex. Cellulose: Structure of 310
Glarum, S. N. Printing Pastes 444
Gleason, P. R. Photo-Electric Photometer 155
Goldthwait, C. F. Emulsifying Oils 356
Graf, H. and Wilken-Jorden, T. J. Sheep: Researches into Dips and Dipping 199
Griboedov, D. N. and Varentzov, P. V. Vat Dyes: Influence of—on Strength of Wool Fibre 316
Grote, Irvine W. Textile Fibres: Microchemical Methods as Applied to Spots on 360
Grunert, A. Piece-Bleaching Machinery 536
Grunsteidl, E. and Hanika, F. Fluorescence Microscope and Determination of Mercerization of Cotton: Use of the 359

H

Hall, A. J. Dyeing: Recent Technical Developments in 405
Dyeing: A Retrospect of 203
Formaldehyde in Treatment of Textile Materials 354
Wetting-Out Agents and Modern Mercerization Methods 358
Hall, R. O. Fastness to Light: Conditions of Temperature and Relative Humidity in Testing—by Means of Artificial Illumination .. 359
Haller, R. Cotton: Histological Synthesis of .. 144
Haller, R. and Lorenz, F. Hypochlorite-Oxycellulose 406
Oxycellulose: Properties of—and Methods for Its Determination 312
Hampson, R. E. V. and Richards, H. W. Photometer of Special Application to Routine Textile Measurements 539
Harland, S. C. Gossypium: Genetics of 145
Harleston, C. F. Dyeing Silk: Notes on 153
Harris, M., Neville, H. A. and Fritz, W. C. Iodine Number of Wool 486
Hart, Ralph. Silk Soaking: Effect of Salt on Boil-Off 147
Sulfonated Oils: Determination of Inorganic Salts in 537
Sulfonated Oils: Determination of Organically Combined Sulfuric Anhydride in 358, 537
Hayes, C. Earl. Telecolor Machine 487
Heb, Kurt. Fibre Research: New Developments in 447
Heertjes, P. M., Coltof, W. and Waterman, H. I. Specific Gravity: Determination of. I, II 147, 445
Herbst. Rendering Textiles Impermeable 202
Herstein, Karl M. Microchemistry: Textile Industry Meets 48

PAGE

Herrick, G. W. and Griswold, G. H. Naphthalene as a Fumigant for the Immature Stages of Clothes Moths and Carpet Beetles 156
Herzog, E. Vat Colors: Reduction Products of .. 358
Herzog, R. O. Fibres: Fine Structure 112
Hess, Kurt and Rabinowitsch, Bruno. Cinematographic Analysis of Swelling in Dark Field by Use of Micromanipulator 318
Hess, K. and Schwarzkopf, O. Alkali-Cellulose .. 440
Hillman, B. S. Mohair Pile Upholstery Fabrics . 443
Pile Fabrics: Special Converting Methods .. 315
Hishiyama, K. and Tomonari, M. Absorption of Tannic Acid by Principal Textile Fibres and by Viscose Rayon Under Varying Conditions 114
Hunlich, R. Thread Count in Fabrics: New Method 152
Hunter, Richard S. Reflectometer and Color Comparator 540
Hustead, E. C. Fading of Fabrics Fast to Sunlight 201

J

Jablonski, A. Polarized Photoluminescence of Adsorbed Molecules of Dyes 444
Jager, A. Viscose Rayon: Cross-Section Shape and Dyeing Properties of 200
Jeanny, M. Polyvinyl Compounds and Their Application in Sizing of Rayons 536
Johnson, E. B. Basic Dyestuffs: Determination of—by Means of Silicotungstic Acid 404
Johnson, G. H. Shrinkage of Cotton and Linen Woven Materials 312
Jonas, K. G. Cellulose: Strength Determination 48
Jones, A. Sodium Perborate as a Bleaching Agent 587
Joseph, Alexandre. Dyeing with Indocarbon Black 153

K

Kaneko, H. Domestic Cocoons: Behaviors of Aqueous Solutions of 310
Kauffmann, H. Bleaching of Cotton and Linen: Chain Reactions in Oxidation Processes 266
Kehren, M. Oliens in the Textile Industry 155
Kershaw, S. Worsted Top Qualities 265
Keys, O. H. Wool Production: Function of Cystine in 201
Kilburn, Richard & Sons. Woolens: Milling of Heavy 482
Kime, J. A. Dye Mixtures: Use of Stannous Chloride in Evaluation of 45
Klyachko, I. R. Sulfur Dyestuff: Absorption at Different Temperatures 316
Kobahashi, K. Dyes: Physical Chemical Properties 314
Kohler, Sigurd. Cotton Yarn: Influence of Fibre-Length on Proportion of Fibre-Strength Utilized in 535
Kollmann, L. Rayon Crepe Fabrics: Treatment of (Viscose)—with Caustic Alkalies 402
Konstantinov, N. Cotton: Influence of Period of Illumination on Development of 144
Krais, P., Krauter, G. and Weinges, H. "Deforgan" Tensile Testing Apparatus 319
Kratky, O. Deformation Mechanism of Fibrous Substances 263
Krauter, G. Hair Weight Determination Apparatus 447
Křepelka, V. Azo Dyestuffs; Notes on Determination of Constitution of 444
Krishnan, K. S. and Mitra, S. M. Negative Polarization in Fluorescence 359
Krollpfeiffer, F., Mulhausen, C. and Wolf, G. Azo Dyes: Light Sensitivity of Aryl-β-Naphthylamine 403
Krüger. Chemistry of Rayon: Progress in the .. 113
Küsebauch, Karl. Control of Mixes of Different Origin by Determination of Swelling Characteristics 588

PAGE

L

Landolt, A. Influence of Light on Vat Dyeings . 405
Langer, K. Mercerizing: Effect of—on Tensile Strength and Expansion of Cotton Yarns (Hosiery) by Different Degrees of Stretching 481
Lawrie, L. G. Textile Finishing: Recent Developments in 316
Lenher, S. and Smith, E. J. Evaluation of Textile Penetrants 405
Lesbré, Michel. Substantive Dye Solutions 115
Levant, G. E. and Nemtzova, R. I. Sulfur Dyes: Colorimetric Determination of 485
Levi, C. Moisture Determination: Sampling of Baled Cotton for 319
Lindner and Oertel. Ring Yarns: Forces on—During Spinning 149
Lipowsky. Cotton Hair: Fineness 204
Lloyd, D. J. and Marriott, R. H. Swelling of Protein Fibres 355
Lloyd, D. J. and Robertson, M. E. Collagen Fibres and the Point of Attack by Proteolytic Enzymes: Structure of 400
Lloyd, L. L. Faults in Textile Materials 148
Loebe, W. W. and Kühn, R. Microbalance 319
Lomanovich, A. and Marker, V. Cotton and Viscose: Influence of Sodium Hydroxide Solutions on Mixed Textiles of 584
Lotze, H. Sodium Cellulose Xanthate: Properties and Composition of 147
Low, Jas. F. & Co., Rove Testing: Jute, Flax, etc. 45
Lüdtke, M. Fibres: Microscopic Analytical Tests 204
Lyubimov, S. Finishing Textiles: Use of Pectin for 149

M

Mainguet. Dyeing of Cellulose Acetate Rayon . 404
Malowan, S. Amino Cellulose 585
Manby, J. Hair of the Bat: Scale Structure of 46
Mann, P. L. Detergency: Mechanism of 314
Markert, J. Cotton: New Method for Detecting—Which Has Been Deteriorated by Chemical Agents 406
Marsh, M. C. Transmission of Heat Through Fabrics 47
Martin, G., Niederhauser, J., Pinte, J. and Toussaint, R. Dyes: Measuring Their Strength to Light 203
Mathewson, W. E. Dye Mixtures: Analysis of 356
Mease, R. T. and Jessup, D. A. Wool-Cotton Textiles: Analysis of 403
Mecheels, O. and Stuhmer, G. Cotton Yarn: Effect of Mercerization on "Counts" of ... 443
Meiss, J. C. Delustering of Rayon 484
Mellanby, K. Hygrometer: A Simple 48
Melson, E. W. Polarizing Microscope 539
Meyer, H. Fibre Measurement: New Methods of 45
Michel, Andre. Dyeing Industry: Use of Stainless Steels in 484
Use of Unoxidizable or Stainless Steels in the Dyeing Industry 446
Michel, L. P. Chromium Salts: Absorption of—by Natural Silk 484
Fireproofing of Fabrics: Permanent 402
Minaev, V. I. and Fedorov, B. P. Basic Dyes: New Fixing Agents for 266
Minaev, V. I. and Pomerantz, G. S. Viscose Rayon: Strengthening—in Dry and Wet States 583
Morgan, G. T., Pratt, D. D. and Pettet, A. E. J. Wetting Agent: Shirlacrol, A New Phenolic.. 317
Morgan, O. M. Quantitative Estimation of Detergency 405
Mosher, H. Sericin Fractions of Silk 480
Mueller, E. J. Printing: Fixation by Albumin in—and Method of Perfecting it 356
Mullin, C. E. Dyeing: Constant Temperature Baths for 153

PAGE

Dyeing Cotton Goods: Friction Marks in .. 356
pH Control in Bleaching and Finishing Cotton 315
pH Control in Dyeing and Printing Cotton . 315
Printing: Yusen Style (Textile) 149
"Rayon Oils" 357

N

Neale, S. M. Colors: Dyeing Properties of Direct Cotton 314
Viscose Dyeing (Properties) 316
Neale, S. M. and Griffiths, L. H. Direct Dyes and Cellulose: Modern Ideas Concerning ... 355
Neustadt, H., Jr. Color Measuring Instruments: Photo-Electric 155
Neville, H. A. and Jeanson, C. A. Wetting Agents in Textile Processing 358
Nichols, J. E. Wool Fibres: Origin of Curls and Twists in 200
Merino Wool: Fibre Growth Phases in Sample of Australian 146
Nikolaev, N. Effect of Products of Hydrolysis of Wool on Dyes of Thiocyanine GR Group .. 405

O

Oguri, S. Cellulose: Hygroscopic Moisture of .. 263
Ohara, K. Silk: Fine Structure of. I–IV, V 199, 311
Silk: Submicroscopic Structure of. IV 112
Okamura, I. Cellulose: Action of Alkali on Native and Mercerized 202
Ongaro, D. Properties of Liquid Silk 442
Ostrozhinskaya, G. Azo Dye Analysis: Substitution of Titration with Dichromate Instead of Iodine in Determination of Stannous Chloride in 265
Otsubo, K. Photo-Activity of Clothing Stuffs and Building Materials after Exposure to Ultra-Violet Rays 201

P

Palinert, R. Chemical Wood Pulp for Rayon Manufacture: Controlling Quality of 144
Pallas, E. Wool: Process for Making Artificial 401
Paume, P. Decantation of Water of Spinning Mills the Safeguard of the Textile Industries 201
Peek, R. L. and McLean, D. A. Capillary Penetration of Fibrous Materials 399
Pettinger, A. H. Wetting-Agents: Testing 47
Pickard, R. H. Statistical Methods in Industry: Applying 360
Textiles: Industrial Uses of 313
Pierson, Gordon G. Starch Viscosity 587
Pinkas, K. Silk and Semi-Silk Satins: Preparation of 150
Planovskii, N. I. Sulfur Dyes: Properties of Water-Soluble 316
Planovskii, N. I. and Ruichkova, E. K. Dyeing with Substantive and Acid Dyes: Determination of Optimum Temperature for 587
Pluzanski, W. Standards for Determining Fastness of Dyes Toward Washing, Perspiration and Water 445
Porai-Koshitz, A. E. Chemistry and Technology of Fibrous Substances 586
Porai-Koshitz, A. E., and etc. Theory of the Dyeing Process 445
Poznanski, S. Viscose: Cause of "Milky" Spots on 534
Pratt, F. C. Cloth-Milling Defects: Elimination of 443
Color Bleeding in Scouring 314
Stains and Their Removal 357
(Wool) Carbonizing Defects: Elimination of 443
Preston, J. M. Viscose Rayon: Significance of Tensile Tests of 46
Prince, J. B. Military Khaki 536

PAGE

R

Radley, H. Naphthol Dyers: Note for—on Prevention of Occupational Dermatitis 536
Rein, H. Dyes: Action of Light Upon 587
Reinhardt, O. Nomograms for Determination of Combined Number of Yarns 539
Rheiner, A. Weakly Acetylated Fibre Celluloses 355
Rice, George. Crocky Dyeings on Suiting Fabrics: Causes of 114
Dyeing Fabrics for the Window Display Industry 314
Dyeing Textiles with Colors Resistant to Alcoholic Stains 586
Dyeing Wool and Cotton Velvet 154
Ridge, B. P., Corner, Mary and Cliff, H. S. Chemical Analysis of Rayons 266
Ridge, B. P. and Turner, K. Cotton and Viscose Rayon Mixtures: Analysis of 318
Rimington, C., Bekker, J. G. and Kellermann, J. Cystine and Wool Production 46
Rinoldi, L. Bleaching Wool (and Silk) with Potassium Permanganate 114
Risch, Karl. Catalytic Destruction of Dyed Yarn by Bleaching 586
Roberts, H. C. Soaking Solutions: Take-up Value 587
Rogovin, Z. A. and Schlachover, M. Cellulose: Dispersion of—in Preparation of Viscose Rayon 198
Rolland, Jean. Delustering of Acetate Rayon Goods. Use of Phenol and Pine Oils 484
Roos, Kurt. Cellulose: Synthesis of 144
Rose, R. E. Dyeing Cellulose Materials with Reference to Structure of Cellulose. 404, 586
Research: Value of 360
Rozenbroek, M. D. Wetting Properties of Liquids: Determining the 487
Rudolph, G. Benzo Fast Copper Dyestuffs 153
Ruemele, Th. Enzymes: Soap-like Action of ... 203
Ruggli, Paul. Substantive Dyeing of Cellulose Fibres 315
Ruggli, P. and Braun, O. Azo Dyes and Intermediates 483

S

Saito, S. Silk Fabrics: Changes of—in Weathering Test 482
Sak, P. P. T., Ma, T–S. and Ma, S–Y. Silk: Chemical Studies on Chinese 44
Sakoshchikov, A. P. Use of Copper-Ammonia Solutions for Determination of Impurities in (Cotton) Linters 534
Sakurada, I. and Futino, K. X-ray Investigation of Natural and Regenerated Silk 355
Sanders, J. P. and Cameron, F. K. Cellulose in Cotton Stalks and Cusps: Unit Cell of 399
Sarkar, P. B. Jute Lignin: Chemistry of 264
Schaeffer, A. Dyeing of Cotton: Colloid-Chemical Processes in 404
Schiefer, H. F. and Appel, W. D. Hosiery Testing Machine 448
Schiefer, H. F. and Cleveland, R. S. Wear of Carpets 313
Schmidt, Hanns. Degumming Natural Silk in the Presence of Acetate Rayon 145
Scholefield, F. and Turner, H. A. Vat Dyeings: Light Tendering of Cotton and Rayon with . 48
Schreiber, W. T., Geib, M. N. V. and Moore, O. C. Consistency of Potato-Starch Size 309
Schulze, K. Hydrogen-ion Concentration: Measurement of—in Textile Industry 536
Schwartz, L. and Tulipan, L. Chemicals Used in Removing Velvet Pile: Dermatitis from 203
Schwarz, E. R. Textile Microscopy Advances ... 487
Scott, E. Kilburn. Fulling and Milling Machinery 201
Scott, W. M. Copper in Textiles: Comparison of Methods for Determination of Small Amounts of 359
Scriba, L. Humidity: Remote Measurement of .. 48

PAGE

Searell, G. W. Thrown Silk: Processing of 152
Sellars, W. B. Rayon: Testing of 487
Shaposhnikov, V. G. and Geizer, G. K. Azo Dyes: Determination of—by Reduction with Titanium Trichloride 586
Sheppard, S. E. and Newsome, P. T. Cellulose: Sorption of Water by 399
Shpitalnuii, A. S. and Lyasch, R. S. Volumetric Analysis of Viscoses 540
Sifferlen, E. Textile Finishing: New Consideration on Use of Glues and Gelatins in 445
Simola, Emil J. Cotton and Wool: Influence of Light on 311
Felting of Wool Through Acids 315
Sitzenhofer, O. B. Cloth Faults in Weaving ... 264
Skovsted, Dr. Cotton: Cytology of 46
Smirnov, B. S. Sulfur Dyes: Determination of . 320
Smith, C. F. Textile Mutochrome 151
Smith, H. DeW. Cellulose Fibres: Surface Properties of 400
Snell, Foster Dee. Waste from Dyeing and Printing: Treatment of 538
Sobue, H. Rayon: Luster of 482
Sobue, H. and Nagano, M. Hydration of Fibres 263
Sobue, H. and Manago, S. Viscosity Investigation of Silk Solution 355
Sobue, H. and Ono, K. Wool Fibre: Chemical Research on Scouring of 113
Somer, H. and Markert, H. Oxycellulose and Hydrocellulose Determination 43
Speakman, J. B. Wool: Reactivity of Sulfur Linkage in 401
Wool Fibre and Its Relation to Finishing ... 148
Wool Keratin: Structure and Its Relation to Swelling Phenomena 44
Spibey, Horace. Cotton Absorption by Card Cylinder Wire, and Its Effects on Sliver and Wastes: Rate of 113
Ssurowaja, A. W. and Viktorov, P. P. Immature and After-Frost Cottons: Chemical Analysis . 199
Stanbury, G. R. Spindle Speed: Accurate Measurement of 116
Staudinger, H. and Kern, W. Branched-Chain Fibre-Molecules: Structure 440
Stephanus. Sizing Warp Threads on the Beam Instead of in Skeins: Advantages of 150
Stevens, H. P. and Gaunt, R. Textile Finishes Research 485
Stout, L. E. and Schiermeier, K. F. Cotton Fabrics: Effect of Previous Starching upon Ease of Washing 312
Suikhra, N. A. Protective Khaki Colors 357
Sunder, Ch. Alizarin Type Colors: Brightness of 585
Sunderland, A. E. Rayon and Its Dye Selectivity 357
Sutton, W. G. Yolk in New Zealand Wools 148

T

Tagliani, G. Tinctorial Determination of Artificial Fibres and Their Mixtures with Cotton 407
Takamatsu, Y. Natural Silk: Solution of 480
Action of Alkaline Copper Solution on Silk Fibroin. II, IV, V, VI, VII, VIII 310, 354, 480
Tanemura, K. and Nishimura, K. Iron on Fibres 448
Tanemura, K. and Yoshida, M. Adsorption of Iron Compounds on Fibres of Cellulose Origin and Its Prevention 483
Tanfani, L. Volumetric Determination of Sulfur in Viscose by Means of Benzidine Hydrochloride 317
Tatu, H. Degumming of Natural Silk: Alkali and Soap in the 441
Use of Aluminum in Construction Materials in the Bleaching Industry 446
Tauszig, E. Chrome Dyes and Their Application 48
Thiebaut, R. Ultramarine Blue and Indanthrene Colors 316

PAGE

Thomas, A. Dyeing: Sanitation and Vocational Diseases 484
Todd, W. M. Vat Dyes on Regenerated Cellulose Yarns and Fabrics: Action of 446
Tomoda, Y. Cellulose: Fermentation by Bacteria 198
Toussaint, R. Colour: Definition 153
Toyoda, I. Degumming of Silk: Influence of Alkalies Upon the 203
Trillar, Jean J. Cellulose Films: Electron Diffaction by 588
Trogus, C. and Hess, K. Silk: Studies of Natural —and Its Behavior with Acids and Alkalies . 46
Trotman, S. R. Knitted Wool Goods: Unshrinkable Finish of 356
Use of Aqueous Chlorine and Bromine Solutions in the Manufacture of Knitted Unshrinkable Wool Fabrics 446
Trotman, S. R. and Gee, G. N. Wool: Determination of Acids in 265
Troutman, J. H. Sulfur Colors: Use of Ammonium Sulfate in Dyeing of 315
Tsunokaye, R. and Enomoti, G. Electrical Conductance of Silk and Other Textile Fibres 400
Textile Fibres: Electric Conductivity of ... 113
Turner, A. J. and Venkataraman, V. Spinning Value of a Cotton from Its Fibre Properties: Prediction of 150
Tyler, Cornelia A. Sulfated Fatty Alcohols 480

U

Ulrich, H. M. Rayon: Recognition and Determination of Dye Faults in—with the Aid of Circular Knitting Machine 357

V

Ventman, L. A. Spectral Study of Soviet Aniline Dyes 540
Vidal, Raymond. Sodium Alkalies on Vegetable Textile Fibres: Overcoming the Bad Effect of 406
Vinces, R. Oiling of Carded Wool 480
Vishnyakov, M. Rayon: Determination of Hardness of 539

W

Wagner, W. Cocoon of Bombyx Mori During Formation and After: Influence of Humidity on 440
Weber, I. E. Bleaching of Wool, Cotton and Silk: Hydrogen Peroxide 153
Bleaching with Hydrogen Peroxide—Modern Product in the Textile Trades 266
Weltzien, W. Linseed Oil Sizes 487
Weltzien, W. and Coordt, W. Rayon Fabrics: Tension Conditions and Their Importance in Treatment and Finishing 44
Weltzien, W., Coordt, W. and Skamkiewica, H. Fabric Investigations. VII, VIII 401
Weltzien, W. and Königs, W. Strength Measurements on Rayon Crepe Yarns Before and after Boiling 485
White, Noel D. Dyeing and Redyeing Silk Hosiery 153
White, Norman T. Copper Stains on Wool: Formation and Identification of 314
Wilson, D. A. and Gordon, N. E. Wool Fibre: Action of Electrolytes on 267
Woods, H. J. Twist: Kinematics of 152
Wright, R. H. Woven Fabrics: Use of Color in. 482
Wurm, Erich. Rubber: Use of—in Combination with Textiles 402

Y

Yewdall, A. Cloth Milling with Acids 153
Yorke, H. Dyeing Acetate Rayon: Recent Ideas in 356
Rayon Fabrics: Color and Lustre of 202

PAGE

Rayons: Differentiation of 48
Yoshida, U. and Takei, B. Ramie Cellulose: Density 442
Yushkov, A. V. Alkaline Boiling: Present Theories of 47

Z

Zechmeister, L. and Toth, C. Animal Cellulose: Structure 440

Research Reports and Articles

Author Index

PAGE

Bancroft, W. D. and Calkin, J. B. Action of Sodium Hydroxide on Cellulose ... 119, 159
Taking Up of Water by Cellulose 363
Bancroft, W. D., Calkin, J. B. and Stillwell, C. W. Effect on the X-ray Pattern of Drying Caustic Pretreated Cotton 411
Campbell, M. S. Disposal and Recovery of Textile Wastes 29
Clark, C. H. Plans for a Research Institute ... 189
Lee, R. L., Jr. A Critical Study of Cotton Manufacturing Processes 235
Morey, D. R. Micellar Arrangement in Various Cellulose Fibres 491
Nutting, R. D. Detection in Dyed Textiles of Small Color Differences 323
Osborne, G. G. Micro-Analysis of Textile Fibres 84

PAGE

Prindle, B. Microbiology of Textile Fibres 413, 463, 555
Reese, J. S., IV. Sulfonation of Benzoic Acid .. 183
Saxl, I. J. Suggested Standardization of Breaking Strength Tests for Rayon Yarns 525
Sisson, W. A. X-ray Analysis of Textile Fibres 286, 429
Steinberger, R. L. Elastic and Plastic Properties of Textile Fibres 207, 271, 331
Stress-Strain Relation in Celanese Single Fibres 543
Thermodynamics of Swelling 451, 513
Teeters, W. O. Influence of Protein Constituents on Wool Fibres 3
Wilson, J. F. Combing Tests with Individual Wool Fleeces 570
Relation of the Sheep's Health to the Growth Rate of Wool 436

Book Reviews

Author Index

PAGE

A. S. T. M. Standards on Textile Materials ... 156
Feiker, Frederick M. Training of Men for the Textile Industry 448
Madigan, John J. Managing Cloth Inventories in the Cotton Textile Industry 488

PAGE

Preston, J. M. Modern Textile Microscopy 320
Rawlins, T. E. Phytopathological and Botanical Research Methods 408
Schwarz, E. W. K. and Mauersberger, H. R. Rayon and Synthetic Yarn Handbook 540

Textile Research

Vol. IV, 1933–34

Abstracts

Subject Index

PAGE

A

α-Cellulose: Analysis of 267
Abaca Fibre: Spectral Reflectance of the Philippine Island Gov't. Standards for 309
Abrasion Testing of Knitted Textiles 588
Absorption of Dyestuffs by Cellulose 444
of Tannic Acid by Principal Textile Fibres and by Viscose Rayon Under Varying Conditions 114
Acala Cotton: Type Selection 440
Acetate Rayon: Degumming Natural Silk in the Presence of 145
Dyeing of—with Basic Dyestuffs 404
On the Saponification of 152
Recent Ideas in Dyeing 356
Goods: Delustering of 484
Acetic Acid: Determination of—in Cellulose Acetate 204
Acid Dyes: Determination of Optimum Temperature for Dyeing with Substantive and 587
Acids: Cloth Milling with 153
and Alkalies: Studies of Natural Silk and Its Behavior with 46
Adsorption of Iron Compounds on Fibres of Cellulose Origin and Its Prevention 483
Ageing Problems 202
Air Conditioning: Development of—in Industrial, Residential and Public Buildings 360
Albumin: Fixation by—in Printing and a Method of Perfecting It 356
Alcoholic Stains: Dyeing Textiles with Colors Resistant to 586
Alizarin Type Colors: Brightness of 585
Alkali and Soap in the Degumming of Natural Silk 441
Alkali-Cellulose: Composition 440
Alkaline Boiling: Present Theories of 47
Copper Solution: Action of—on Silk Fibroin 310, 354, 480
Solutions: Dissolution of Chemically Modified Cotton Cellulose in 533
Aluminum: Use of—in the Construction Materials in the Bleaching Industry 446
with Regard to Textile Dyeing and Finishing Machinery 483
Amino Cellulose 585
Ammonium Sulfate: Use of—in the Dyeing of Sulfur Colors 315
Aniline Dyes: Spectral Study of Soviet 540
Animal Cellulose: Structure 440
Antioxidants of Rubber Latex 403
Apparatus for Fluorescence Microscopy 155
Aqueous Chlorine: Use of—and Bromine Solutions in the Manufacture of Knitted Unshrinkable Wool Fabrics 446
Iodine Solutions: Coloring of Cellulose Derivatives by 317
Artificial Fibres: Tinctorial Determination of—and Their Mixtures with Cotton 407

PAGE

Illumination: Conditions of Temperature and Relative Humidity in Testing Fastness to Light by Means of 359
Leather: New Processes for Preparation of .. 535
Silk: New Methods for Investigation of 535
Ashed Fibres: Microscopy 197
Atmospheric Humidity: Effect of—on Moisture Content of Cotton 354
Auxiliary Products Used in Textile Industry 357
Azo Chromophores 265
Dye Analysis: Substitution of a Titration with Dichromate Instead of Iodine in Determination of Stannous Chloride in 265
Dyes: Determination of—by Reduction with Titanium Trichloride 586
Light Sensitivity of Aryl-β-Naphthylamine 403
Proposal for the Nomenclature of 483
and Intermediates 483
Dyestuffs: Application of Insoluble 266
Notes on Determination of Constitution of 444

B

Baled Cotton: Sampling of—for Moisture Determination 319
Basic Dyes: New Fixing Agents for 266
Dyestuffs: Determination of—by Means of Silicotungstic Acid 404
Benzidine Hydrochloride: Volumetric Determination of Sulfur in Viscose by Means of 317
Benzo Fast Copper Dyestuffs 153
Binocular Dissecting Microscope: A Foot-Focusing Device for the 447
Blackface Sheep: Note on the Inheritance of Kemp in 145
Bleaching: Catalytic Destruction of Dyed Yarn by 586
Agent: Sodium Perborate as a 587
and Dyeing of Viscose Schappe 404
Coloring and Finishing of Fine Cotton Fibres: Rational Technic of 586
Industry: Use of Aluminum in the Construction Materials in the 446
of Cotton and Linen: Chain Reactions in Oxidation Processes 266
Wool: Stabilization of Hydrogen Peroxide in the 483
Cotton and Silk: Hydrogen Peroxide ... 153
with Hydrogen Peroxide—Modern Product in the Textile Trades 266
Strongly Alkaline Hydrogen Peroxide .. 404
Wool (and Silk) with Potassium Permanganate 114
Branched-Chain Fibre-Molecules: Structure 440
Bromine Solutions: Use of Aqueous Chlorine and —in the Manufacture of Knitted Unshrinkable Wool Fabrics 446

PAGE

C

Capillary Penetration of Fibrous Materials 399
Carbonizing Defects: Elimination of (Wool) 443
Carpets: Wear of 313
Catalytic Destruction of Dyed Yarn by Bleaching 586
Caustic Alkalies: Treatment of (Viscose) Rayon Crepe Fabrics with 402
Cellulose: Absorption of Dyestuffs by 444
Action of Alkali on Native and Mercerized . 202
Adsorption of Iron Compounds on Fibres of —Origin and Its Prevention 483
Copper Number of 197
Dispersion of—in Preparation of Viscose Rayon 198
Dyeing Cellulose Materials with Reference to the Structure of 404, 586
Fermentation by Bacteria 198
Hygroscopic Moisture of 263
Modern Ideas Concerning the Direct Dyes and 355
Preparation from Cotton Hulls 198
Sorption of Water by 399
Strength Determination of 48
Structure of 310
of Animal 440
Synthesis of 144
Acetate: Cold Dyeing of—with Reserve Printings 484
Determination of Acetic Acid in 204
Treatment of 203
Rayon: Dyeing of 404
Derivatives: Coloring of—by Aqueous Iodine Solutions 317
Fibres: Substantive Dyeing of 315
Surface Properties of 400
Films: Electron Diffraction by 588
Gel: Structure of 310, 484
in Cotton Stalks and Cusps: Unit Cell of .. 399
o-Chlorobenzyl Ethers: Formation 144
Yarns and Fabrics: Action of Vat Dyes on Regenerated 446
Chemical Agents: New Method for Detecting Cotton Which Has Been Deteriorated by .. 406
Analysis of Rayons 266
Wood Pulp for Rayon Manufacture: Controlling Quality of 144
Chemicals Used in Removing Velvet Pile: Dermatitis from 203
Chemistry and Technology of Fibrous Substances 586
of Rayon Progress in the—1930–33 113
Chrome Dyes and Their Application 48
Chromium Salts: Absorption of—by Natural Silk 484
Cinematographic Analysis of Swelling in the Dark Field by Use of a Micromanipulator 318
Cloth Faults in Weaving: Use of an Analysis ... 264
—Milling Defects: Elimination of 443
Milling with Acids 153
Qualities: A Tactile Comparison of the—of Continental and Noble Combed Materials 535
Clothes Moths and Carpet Beetles: Naphthalene as a Fumigant for the Immature Stages of .. 156
Cocoon of Bombyx Mori During Formation and After: Influence of Humidity on 440
Cold Dyeing of Cellulose Acetate with Reserve Printings 484
Collagen Fibres and the Point of Attack by Proteolytic Enzymes: Structure of 400
Colloid-Chemical Processes in Dyeing of Cotton . 404
Properties of Sulfur Dyes 586
Color: Definition 153
An Electric Eye for 588
Use of—in Woven Fabrics 482
Bleeding in Scouring 314
Comparator and Reflectometer 540
Measuring Instruments: Photo-Electric 155
Colorimetric Determination of Sulfur Dyes 485
Coloring, Bleaching and Finishing of the Fine Cotton Fibres: Rational Technic of 586

PAGE

Colors: Dyeing Properties of Direct Cotton 314
Resistant to Alcoholic Stains: Dyeing Textiles with 586
Control of Mixes of Different Origin by a Determination of the Swelling Characteristics 588
Copper-Ammonia Solutions for the Determination of Impurities in (Cotton) Linters: Use of .. 534
Copper in Textiles: Comparison of Methods for the Determination of Small Amounts of 359
Number of Cellulose 197
Stains on Wool: Formation and Identification of 314
Cotton: Colloid-Chemical Processes in Dyeing of 404
Cytology of 46
Effect of Atmospheric Humidity on Moisture Content of 354
Histological Synthesis of 144
Influence of Period of Illumination on the Development of 144
New Method for Detecting—Which Has Been Deteriorated by Chemical Agents 406
pH Control in Bleaching and Finishing 315
Dyeing and Printing 315
Prediction of Spinning Value of a—from Its Fibre-Properties 150
Process Giving—the Appearance of Linen ... 481
Tinctorial Determination of Artificial Fibres and Their Mixtures with 407
Type Selection of Acala 440
Absorption by Card Cylinder Wire, and Its Effects on Sliver and Wastes: Rate of .. 113
Cellulose: Dissolution of Chemically Modified—in Alkaline Solutions 533
Fabrics: Effect of Previous Starching Upon Ease of Washing 312
Fibre: Minute Structure of 116
Fibres: Rational Technic of Bleaching, Coloring and Finishing of Fine 586
Sorption on—of Dyes with Varying Molecular Association in Solution 485
Goods: Friction Marks in Dyeing 356
Hair: Fineness 204
Hairs: Deconvolution of—as a Test of the Mercerization Process 115
Development 198
Hybridizing: New Technique in 583
Piece Goods: Water as Applied in Finishing.. 317
Sorter: Application of Suter-Webb Duplex .. 447
Stalks and Cusps: Unit Cell of Cellulose in. 399
Stapling Test: Standard Form for the 267
Structure: Theories of 263
Yarn: Effect of Mercerization on the "Counts" of 443
Influence of Fibre-Length on the Proportion of Fibre-Strength Utilized in 535
Yarns (Hosiery): Effect of Mercerizing on Tensile Strength and Expansion of—by Different Degrees of Stretching 481
and Jute Celluloses: Comparative Studies ... 43
Linen: Chain Reactions in Oxidation Processes of Bleaching 266
Woven Materials: Shrinkage of ... 312
Rayon: Light Tendering of—with Vat Dyeings 48
Viscose: Influence of Sodium Hydroxide Solutions on Mixed Textiles of 584
Rayon Mixtures: Analysis of 318
Wood Cellulose: Assumed Non-Identity of 441
Wool: Influence of Light on 311
Cards Do Not Remove Short Fibre 584
Cottons: Chemical Analysis of Immature and After-Frost 199
Creping Rayon Fabrics 148
Crocky Dyeings on Suiting Fabrics: Causes of .. 114
Crystals of the Living Body 112
Cystine: Function of—in Wool Production 201
and Wool Production 46

PAGE

D

Decantation of the Water of Spinning Mills the Safeguard of the Textile Industries 201
" Deforgarn " Tensile Testing Apparatus 319
Deformation Mechanism of Fibrous Substances .. 263
Degumming Natural Silk in the Presence of Acetate Rayon 145
of Natural Silk: Alkali and Soap in the ... 441
Silk: Influence of Alkalies Upon the ... 203
Delustering of Acetate Rayon Goods. Use of Phenol and of Pine Oils 484
of Rayon 354, 484
Dermatitis: Note for Naphthol Dyers on the Prevention of Occupational 536
Detergency: Mechanism of 314
Quantitative Estimation of 405
Direct Dyeings: Mechanism of 484
Dyes and Cellulose: Modern Ideas Concerning the 355
Domestic Cocoons: Behaviors of Aqueous Solutions of 310
Drafting and Doubling: Considerations in Worsted 264
Dry Micro-Distillation: Differentiating Between Genuine Silk and Tussah and Yamamai Silks by Means of 199
Dustiness of Certain Sized Fabrics 312
Dye Faults in Rayon: Recognition and Determination of—with the Aid of the Circular Knitting Machine 357
Mixtures: Analysis of 356
Use of Stannous Chloride in Evaluation of 45
Dyed Yarn: Catalytic Destruction of—by Bleaching 586
Dyeing: Constant-Temperature Baths for 153
Recent Technical Developments in 405
*p*H in 406
Sanitation and Vocational Diseases 484
Dyeing Acetate Rayon: Recent Ideas in 356
and Finishing Machinery: Aluminum with Regard to Textile 483
and Printing: Treatment of Waste from 538
and Redying Silk Hosiery 153
Cellulose Materials with Reference to the Structure of Cellulose 404, 586
Cotton Goods: Friction Marks in 356
Fabrics for the Window Display Industry .. 314
Industry: pH Determination in the 536
Use of Stainless Steels in the 484
Use of Unoxidizable or Stainless Steels . 446
of Acetate Rayon with Basic Dyestuffs: Quantitative Investigations of the Action of Added Substances in the 404
of Cellulose Acetate Rayon 404
of Cotton: Colloid-Chemical Processes in .. 404
Process: Theory of the 445
Properties and Cross-Section Shape of Viscose Rayon 200
of Direct Cotton Colors 314
Rayon Crepes Before Finishing 116
Retrospect of 203
Silk: Notes on 153
Silk and Rayon Fosiery: Avoiding Defects in 153
Textiles with Colors Resistant to Alcoholic Stains 586
with Indocarbon Black CL and CLG 153
with Substantive and Acid Dyes: Determination of Optimum Temperature for 587
Wool and Cotton Velvet 154
Dyes: Action of Light Upon 587
Measuring Their Strength to Light 203
Physical Chemical Properties of 314
Polarized Photoluminescence of Adsorbed Molecules of 444
Sorption on Cotton Fibres of—with Varying Molecular Association in Solution 485
Dyestuffs: Absorption of—by Cellulose 444
Benzo Fast Copper 153

PAGE

E

Elastic Colloids: Structure 198
Electric Conductivity of Textile Fibres 113
Eye for Color 588
Electrical Conductance of Silk and Other Textile Fibres 400
Electron Diffraction by Cellulose Films 588
Emulsifying Oils: Simple Method for 356
Enzymes: Soap-Like Action of 203
Evaluation of Textile Penetrants 405

F

Fabric Investigations 401
Fabrics: Comparative Analysis of Three Hundred 402
Fading of—Fast to Sunlight 201
Measuring the Textile Qualities of 359
New Method for Thread Count in 152
Wear Resistance of 585
Fading: Unusual Causes of 315
of Fabrics Fast to Sunlight 201
Fastness of Dyes: Standards for Determining—Toward Washing, Perspiration, Water .. 445
to Light: Conditions of Temperature and Relative Humidity in Testing—by Means of Artificial Illumination 359
to Light: Testing 48
Faults in Finished Fabrics 150
in Textile Materials: Some General Sources . 148
Felting of Wool Through Acids 315
Fibre Celluloses: Weakly Acetylated 355
Growth Phases in a Sample of Australian Merino Wool 146
Length: Influence of—on the Proportion of Fibre-Strength Utilized in Cotton Yarn.. 535
Measurement: New Methods of 45
Research: New Developments in 447
Strength Utilized in Cotton Yarn 535
Fibres: Detection of Iron on 448
Fine Structure 112
Hydration of 263
Microscope Analytical Tests 204
Sorption of Iodine Vapor by 480
for Marine Cordage: Empire 441
Fibrous Materials: Capillary Penetration of 399
Substances: Summary of Research on the Chemistry and Technology of 586
Finishing, Bleaching and Coloring of the Fine Cotton Fibres: Rational Technic of 586
of Worsted Warp and Woolen Weft Poplins and Reps 482
Repp and Poplin Fabrics: Reducing Costs and Faults in the Preparing and 149
Textiles: Use of Pectin for 149
Fireproofing of Fabrics: Permanent 402
Flame-Proofing of Textiles 47
Flax Fibre Structure and Quality 43
Yarn: Relation Between Absolute and Wet Strength 402
Fleece Analysis in Sheep 145
Fluorescence: Negative Polarization in 359
Microscope and the Determination of Mercerization of Cotton: Use of 359
Microscopy: Apparatus for 155
Formaldehyde in the Treatment of Textile Materials 354
Fulling and Milling Machinery 201

G

Gelatins and Glues: New Consideration on Use of—in Textile Finishing 445
Genuine Silk and Tussah and Yamamai Silks: Differentiating Between—by Means of Dry Micro-Distillation 199
Glues and Gelatins: New Consideration on the Use of—in Textile Finishing 445
Gossypium: Genetics of 145

PAGE

H

Hair Fibres of the Romney Sheep 441
of the Bat: Scale Structure of 46
Weight Determination Apparatus 447
Wool and Related Fibres: X-ray Studies of Structure of 442
Hard Cordage Fibres: Technological Study of 204
Helioindoscarlet S: Production of—on the Fibre . 537
Hosiery: Avoiding Defects in Dyeing Silk and Rayon 153
Dyeing and Redyeing Silk 153
Dyeing: After-Treatment Methods in 154
Testing Machine 448
Yarns: Examination of Mercerized 154
Humidity: Influence of—on Cocoon of Bombyx Mori 440
Measurement of the—of the Air in Closed Spaces 486
Remote Measurement of 48
and Temperature: Conditions of Relative—in Testing Fastness to Light by Means of Artificial Illumination 359
Hydration of Fibres 263
Hydrocellulose and Oxycellulose Determination .. 43
Hydrogen Ion Concentration: Determination of—of Hypochlorite Solutions with the Glass Electrode 154
Measurement of—in the Textile Industry .. 536
Hydrogen Peroxide: Bleaching with 266
Bleaching with Strongly Alkaline 404
Stabilization of—in Bleaching of Wool.. 483
Bleaching of Wool, Cotton and Silk 153
Hydrolysis of Wool: Effect of Products of—on Dyes of Thiocyanine GR Groups 405
Hygrometer: A New Pattern 359
Simple 48
Hygroscopic Moisture of Cellulose 263
Hypochlorite-Oxycellulose 406

I

Immature and After-Frost Cottons: Chemical Analysis 199
Impurities in (Cotton) Linters: Use of Copper-Ammonia Solutions for Determination of ... 534
Indanthrene Colors and Ultramarine Blue 316
Indian Cottons: Note on the Wax Contents of—with Special Reference to their Feel 583
Indocarbon Black: Dyeing with 153
Inorganic Salts: Determination of—in Sulfonated Oils 537
Iodine Number of Wool: Method for Determining the Action of Various Chemical Reagents on Wool and Other Proteins 486
Vapor: Sorption of—by Fibres 480
Iron Compounds: Adsorption of—on Fibres of Cellulose Origin and Its Prevention ... 483
on Fibres: Detection of 448
Isoelectric Point of Liquid Silk 147

J

Jute and Cotton Celluloses: Comparative Studies 43
Flax, etc., Rove Testing 45
Latex 312
Lignin: Chemistry of 264

K

Kemp in Blackface Sheep: Note on Inheritance of 145
Kinematics of Twist 152
Knitted Fabrics: Spirality in 584
Textiles: Abrasion Testing of 588
Unshrinkable Wool Fabrics: Use of Aqueous Chlorine and Bromine Solutions in Manufacture of 446
Wool Goods: Unshrinkable Finish of 356

PAGE

L

Latex and Jute 312
Light: Action of—Upon Dyes 587
on Vat Dyeings: Influence of 405
Linen: Process Giving Cotton the Appearance of. 481
and Cotton Woven Materials: Shrinkage of.. 312
Linseed Oil Sizes 487
Liquids: Determining the Wetting Properties of.. 487
of High Refractive Index 407
Load-Extension Recorder: New Autographic 155
Loading of Wool 486
Luster of Rayon 482

M

Mercerization: Effect of—on " Counts " of Cotton Yarn 443
of Cotton: Use of Fluorescence Microscope . 359
Process: Deconvolution of Cotton Hairs 115
Mercerized Hosiery Yarns: Examination of 154
Mercerizing: Effect of—on Tensile Strength and Expansion of Cotton Yarns (Hosiery) by Different Degrees of Stretching 481
Merino Wool: Fibre Growth Phases in Sample of Australian 146
Metals: Micro-Determination of—in Commercial Rayon Yarn 357
Microbalance 319
Microchemical Methods as Applied to Spots on Textile Fibres 360
Microchemistry: Textile Industry Meets 48
Micro-Comparator: Simplified 267
Determination of Metals in Commercial Rayon Yarn 357
Manipulator: Cinematographic Analysis of Swelling in Dark Field by Use of 318
Microscope: A Foot-Focusing Device for the Binocular Dissecting 447
What the—Shows of Textile Fibres 360
Microscopy: Recent Advances in 407
of Ashed Fibres 197
Mildew: Defects Caused by 265
Military Khaki 536
Milling of Heavy Woolens 482
Mohair Pile Upholstery Fabrics: Converting of .. 443
Moistening: Sizing of Yarns and Fabrics 116
Moisture Content of Cotton: Effect of Atmospheric Humidity on 354
Determination: Sampling of Baled Cotton for 319
Molecular Structure of Wool 47
Molecules of Dyes: Polarized Photoluminescence of Adsorbed 444
Mutochrome: Textile 151

N

Naphthalene as a Fumigant for the Immature Stages of Clothes Moths and Carpet Beetles 156
Naphthol Dyers: Note for—on the Prevention of Occupational Dermatitis 536
Natural Silk: Absorption of Chromium Salts by . 484
Degumming—in the Presence of Acetate Rayon 145
Is It Possible to Produce—Artificially? 116
Solution of 480
Negative Polarization in Fluorescence 359
Negro Hair: Spirals and Twists 46
Nomenclature of Azo Dyes: Proposal for the ... 483
Nomograms for the Determination of the Combined Number of Yarns 539

O

Oiling of Carded Wool 480
Oliens in the Textile Industry 155
Oxidized Fatty Acids: Determination of—in Threads and Crepes 536
Oxycellulose 311

PAGE

Properties of—and Methods for Determination 312
and Hydrocellulose Determination 43

P

Pectin: Use of—for Finishing Textiles 149
Penetrants: Evaluation of Textile 405
pH Control in Dyeing and Printing Cotton 315
in Bleaching and Finishing Cotton 315
Determination in the Dyeing Industry 536
Photo-Activity of Clothing Stuffs and Building Materials After Exposure to Ultra-Violet Rays 201
Electric Photometer 155
electric Cell in the Textile Industry 407
Photometer of Special Application to Routine Textile Measurements 539
Physical Chemical Properties of Dyes 314
Phytopathological and Botanical Research Methods 408
Piece-Bleaching Machinery 536
Pigments in Natural Silk 441
Pile Fabrics: Special Converting Methods Used for 315
Polarized Photoluminescence of Adsorbed Molecules of Dyes 444
Polarizing Microscope 539
Polyvinyl Compounds and Their Application in the Sizing of Rayons 536
Potassium Permanganate: Bleaching Wool (and Silk) with 114
Potato-Starch Size: Consistency of 309
Printing: Converter's Guide to 356
Fixation by Albumin in—and a Method of Perfecting It 356
Yusen Style (Textile) 149
and Dyeing: Treatment of Waste from 538
Pastes 444
Processing Piece Goods. Practical Ideas in Processing Cotton, Rayon, Silk and Linen Piece Goods 47
Properties of Liquid Silk 442
Protective Khaki Colors 357
Proteolytic Enzymes: Structure of Collagen Fibres and Point of Attack by 400
Protein Fibres: Swelling of 355

Q

Quantitative Estimation of Detergency 405

R

Ramie Cellulose: Density 442
Raw Silk: Progress in Standard Tests for 537
Technical and Commercial Properties of 46
Grading in Japan 534
Rayon: Before Papyrus . . . Beyond— 534
Delustering of 354, 484
Determination of Hardness of 539
Influence of the Rate of Stretching on the Strength of—Under Certain Conditions Prescribed by Recognized Authority 149
Luster of 482
Progress in the Chemistry of 113
Recognition and Determination of Dye Faults in—with the Aid of Circular Knitting Machine 357
Testing of 487
and Cotton: Light Tendering of—with Vat Dyeings 48
and Its Dye Selectivity 357
Crepe Fabrics: Treatment of (Viscose)—with Caustic Alkalies 402
Crepes: Dyeing—Before Finishing 116
Crepe Yarns: Strength Measurements on—Before and After Boiling 485
Fabric Cross-Sections: Preparation 319

PAGE

Fabrics: Color and Luster of 202
Tension Conditions and Their Importance in Treatment and Finishing 44
Manufacture: Controlling Quality of Chemical Wood Pulp for 144
Oils. Properties, Markets and Uses of Lubricants and Softeners on Synthetic Yarns . 357
Woven Cloth 443
Rayons: Chemical Analysis of 266
Differentiation of 48
Polyvinyl Compounds and Their Application in the Sizing of 536
Reflectometer and Color Comparator 540
Refractive Index of Solids: Investigation on the Determination of 155
Rendering Textiles Impermeable 202
Repp and Poplin Fabrics: Preparing and Finishing 149
Research: Value of 360
Resinified Linen: Preparation of 47
*r*H in Dyeing 406
Ring Yarns: Forces on—During Spinning 149
Rove Testing: Jute, Flax, Etc. 45
Rubber: Use of—in Combination with Textiles .. 402
Latex: Antioxidants of 403

S

Safety Razor Blades: On Sharpness Testing of .. 407
Saponification of Acetate Rayon 152
Scouring: Color Bleeding in 314
of Wool Fibre: Chemical Research on the .. 113
Sericin Fractions of Silk 480
Sewage of the Textile Industry: Principles Involved in Clarifying and Purifying 156
Sheep: Fleece Analysis in 145
Researches into Dips and Dipping 199
Shirlacrol, A New Phenolic Wetting Agent 317
Shrinkage of Cotton and Linen Woven Materials . 312
Silicotungstic Acid: Determination of Basic Dyestuffs by Means of 404
Silk: Alkali and Soap in Degumming of Natural . 441
Change in Physical and Chemical Character of—Caused by Weakening of Larva 264
Chemical Studies on Chinese 44
Fine Structure of 199, 311
Influence of Alkalies Upon Degumming of .. 203
New Wild 147
Pigments in Natural 441
Properties of Liquid 442
Sericin Fractions of 480
Studies of Natural—and Its Behavior with Acids and Alkalies 46
Submicroscopic Structure of 112
X-ray Investigation of Natural and Regenerated 355
and Other Textile Fibres: Electrical Conductance of 400
and Semi-Silk Satins: Preparation of 150
Fabrics: Changes of—in Weathering Test ... 482
Fibres in Reeling: What Substance is Responsible for Cohesion of 354
Fibroin: Action of Alkaline Copper Solution on 310, 354, 480
Gut. Swelling of Protein Fibres 355
Soaking: Effect of Salt on Boil-off 147
Solution: Viscosity Investigation 355
Sized Fabrics: Dustiness of 312
Sizing of Rayons: Polyvinyl Compounds and Their Application in the 536
of Yarns and Fabrics: Moistening 116
Warp Threads on the Beam Instead of in Skeins: Advantages of 150
Sliver and Wastes: Rate of Cotton Absorption by Card Cylinder Wire and its Effects on 113
Soaking Solutions: Take-up Value of 587
Soap and Alkali in Degumming of Natural Silk . 441

PAGE

Sodium Alkalies on Vegetable Textile Fibres: Overcoming the Bad Effect of 406
Cellulose Xanthate: Properties and Composition of 147
Hydroxide Solutions: Influence of—on Mixed Textiles of Cotton and Viscose 584
Perborate as a Bleaching Agent 587
Sorption of Cotton Fibres of Dyes with Varying Molecular Association in Solution 485
of Iodine Vapor by Fibres 480
Specific Gravity: Determination of 147, 445
Spectral Reflectance of the Philippine Island Government Standards for Abaca Fibre . 309
Study of Soviet Aniline Dyes 540
Spectrograph: X-ray Fibre 48
Spindle Speed: Accurate Measurement of 116
Spinning Value of a Cotton from its Fibre-Properties: Prediction of 150
Spirality in Knitted Fabrics 584
in the Growth of Wool Fibres 481
Stainless Steels: Use of—in the Dyeing Industry. 484
Stains and Their Removal 357
Standards for Determining the Fastness of Dyes Toward Washing, Perspiration and Water .. 445
Stannous Chloride in Evaluation of Dye Mixtures: Use of 45
Starch Viscosity 587
Starching: Effect of Previous—Upon Ease of Washing Cotton Fabrics 312
Statistical Methods in Industry: Applying 360
Stocking Fabrics: Periodic Variations in Hank Processed Yarn, and Patterns Produced by Them in 151
Strength Measurements on Rayon Crepe Yarns Before and After Boiling 485
Substantive Dye Solutions 115
Dyeing of Cellulose Fibres 315
Suiting Fabrics: Causes of Crocky Dyeings on .. 114
Sulfated Fatty Alcohols 480
Sulfonated Oils: Determination of Inorganic Salts in 537
Determination of Organically Combined Sulfuric Anhydride in 358, 537
and Glass Electrode 445
Sulfur Colors: Use of Ammonium Sulfate in Dyeing of 315
Dyes: Colloidchemical Properties of 586
Colorimetric Determination of 485
Determination of 320
Properties of Water-Soluble 316
Dyestuff: Absorption at Different Temperatures 316
in Wool: Distribution and Origin of 443
Linkage in Wool: Reactivity of the 401
Sulfuric Anhydride: Determination of Organically Combined—in Sulfonated Oils 358, 537
Surface Tension and Wetting Phenomena in the Textile Industry 316
Swelling Characteristics: Control of Mixes of Different Origin by a Determination of. 588
of Protein Fibres. II. Silk Gut 355

T

Tannic Acid: Absorption of—by Principal Textile Fibres and by Viscose Rayon under Varying Conditions 114
Telecolor Machine: Demonstration of the 487
Temperature and Relative Humidity: Conditions of—in Testing Fastness to Light by Means of Artificial Illumination 359
Tensile Testing Apparatus: "Deforgarn" 319
Tension Conditions and Their Importance in Treatment and Finishing of Rayon Fabrics .. 44
Testing in a Spinning Mill: Systematic 360
Textile Fibres: Electric Conductivity of 113
Microchemical Methods as Applied to Spots on 360
What the Microscope Shows of 360

PAGE

Finishes Research 485
Finishing: New Consideration on the Use of Glues and Gelatins in 445
Recent Developments in 316
Microscopy Advances 487
Mutochrome 151
Textiles: Industrial Uses of 313
Thread Count in Fabrics: New Method for 152
Thrown Silk: Processing of 152
Tinctorial Determination of Artificial Fibres and Their Mixtures with Cotton 407
Titanium Trichloride: Determination of Azo Dyes by Reduction with 586
Transmission of Heat Through Fabrics 47
Twist: Kinematics of 152
Direction 584

U

Ultramarine Blue and the Indanthrene Colors ... 316
Ultra-Violet Rays: Photo-Activity of Clothing Stuffs and Building Materials After Exposure to 201
Unshrinkability of Wool in Industrial Practice ... 358

V

Vat Colors: Reduction Products of 358
Dyeings: Influence of Light on 405
Light Tendering of Cotton and Rayon with 48
Dyes: Influence of—on Strength of Wool Fibre 316
on Regenerated Cellulose Yarns and Fabrics: Action of 448
Vegetable Textile Fibres: Overcoming the Bad Effect of Sodium Alkalies on 406
Velvet: Dyeing Wool and Cotton 154
Viscose: Cause of "Milky" Spots on 534
Volumetric Determination of Sulfur in—by Means of Benzidine Hydrochloride 317
and Cotton: Influence of Sodium Hydroxide Solutions on Mixed Textiles of 584
Dyeing (Properties) 316
Rayon: Absorption of Tannic Acid by—under Varying Conditions 114
Calculable Relationships in Spinning of . 200
Cross-Section Shape and Dyeing Properties 200
Dispersion of Cellulose in Preparation .. 198
Significance of Tensile Tests of 46
Strengthening—in Dry and Wet States .. 583
and Cotton Mixtures: Analysis of 318
Schappe: Bleaching and Dyeing of 404
Viscoses: Volumetric Analysis of 540
Viscosity Investigation of Silk Solution 355
of Fibroin Sol 147
Volumetric Analysis of Viscoses 540
Determination of Sulfur in Viscose by Means of Benzidine Hydrochloride 317

W

Warp Stop Motion: An Improved 265
Threads: Advantages of Sizing—on the Beam Instead of in Skeins 150
Waste from Dyeing and Printing: Treatment of.. 538
Water: Sorption of—by Cellulose 399
as Applied in Finishing Cotton Piece Goods. 317
—Soluble Sulfur Dyes: Properties of 316
Wax Content of Indian Cottons: Note on the—with Special Reference to Their Feel 583
Weakly Acetylated Fibre Celluloses 355
Wear of Carpets 313
Resistance of Fabrics 585
Wetting Agent: Shirlacrol, A New Phenolic 317
Testing. Examination of Chemical Auxiliaries in the Textile Trades 47
in Textile Processing 358

PAGE

—Out Agents and Modern Mercerization Methods 358
Phenomena and Surface Tension in Textile Industry 316
Properties of Liquids: Determining the 487
Wild Silks 147
on European Market 481
Wood Cellulose and Cotton: Assumed Non-Identity 441
Wool: Determination of Acids in 265
Determination of—in Wool-Containing Papers by Chemical Means 408
Distribution and Origin of Sulphur in 443
Effect of Products of Hydrolysis of—on Dyes of Thiocyanine GR Group 405
Felting of—Through Acids 315
Formation and Identification of Copper Stains on 314
Iodine Number of 486
Loading of 486
Molecular Structure of 47
Obtaining Unshrinkability of—in Industrial Practice 358
Oiling of Carded 480
Process for Making Artificial 401
Reactivity of Sulfur Linkage in 401
Research Notes on 408
Stabilization of Hydrogen Peroxide in the Bleaching of 483
and Cotton: Influence of Light on 311
and Cystine Production 46
Carbonizing Defects: Elimination of 443
—Containing Papers: Determination of Wool in—by Chemical Means 408
—Cotton Textiles: Analysis of 403
Fibre: Action of Electrolytes on 267
Chemical Research on Scouring of 113

PAGE

Influence of Vat Dyes on Strength of .. 316
and Its Relation to Finishing: Structure of 148
Fibres: Origin of Curls and Twists in 200
Spirality in Growth of 481
Goods: Unshrinkable Finish of Knitted 356
Hair and Related Fibres: X-ray Studies of Structure of 442
in the Merino: Growth of 264
Keratin: Structure and Its Relation to Swelling Phenomena 44
Production: Function of Cystine in 201
Research Results 585
Textiles: Testing and Refinishing of 585
Wooled Sheep: Evolution in 481
Woolen Carding Machine: Continental Type of .. 265
Weft Poplins and Reps: Finishing of Worsted Warp and 482
Woolens: Milling of Heavy 482
Wools: Some Studies of Yolk in New Zealand ... 148
Worsted Drafting and Doubling: Considerations in 264
Top Qualities 265
Warp and Woolen Weft Poplins and Reps: Finishing of 482
Woven Fabrics: Use of Color in 482

X

X-ray Fibre: Spectrograph 48
Investigation of Natural and Regenerated Silk 355
Studies of Structure of Hair, Wool and Related Fibres 442

Y

Yolk in New Zealand Wools: Some Studies of ... 148

Research Reports and Articles

Subject Index

PAGE

Action of Sodium Hydroxide on Cellulose ..119, 159
Combing Tests with Individual Wool Fleeces 570
Co-operative Research 261
Critical Study of Cotton Manufacturing Processes 235
Detection in Dyed Textiles of Small Color Differences 323
Disposal and Recovery of Textile Wastes. I ... 29
Effect on the X-ray Pattern of Drying Caustic Pretreated Cotton 411
Elastic and Plastic Properties of Textile Fibres 207, 271, 331
Fabric Wear Resistance and Methods of Measuring It 348
Flax Growing and Manufacture to be Studied .. 352
Improvement in Raw Cotton 479
Micellar Arrangement in Various Cellulose Fibres. 491

PAGE

Micro-Analysis of Textile Fibres 84
Microbiology of Textile Fibres 413, 463, 555
Plans for a Research Institute 189
Relation of the Sheep's Health to the Growth Rate of Wool 436
Sizing of Rayon and Cotton Warps 363
Stress-Strain Relation in Celanese Single Fibres . 543
Suggested Standardization of Breaking Strength Tests for Rayon Yarns 525
Sulfonation of Benzoic Acid 183
Taking Up of Water by Cellulose 371
Thermodynamics of Swelling 451, 513
Twist and Twist Take-up Tester 141
X-ray Analysis of Textile Fibres 286, 429
Zein: Possible Protein Source of Artificial Silk .. 142

Book Reviews

Subject Index

PAGE

A. S. T. M. Standards on Textile Materials 156
Managing Cloth Inventories in the Cotton Textile Industry 488
Modern Textile Microscopy 320

PAGE

Phytopathological and Botanical Research Methods 408
Rayon and Synthetic Yarn Handbook 540
Training of Men for the Textile Industry 448